

**INSTALLATION MANUAL**



**Pressurized  
Spectra III™ Series**



**Fiber Optic Models**

**C2485M-A (1/05)**



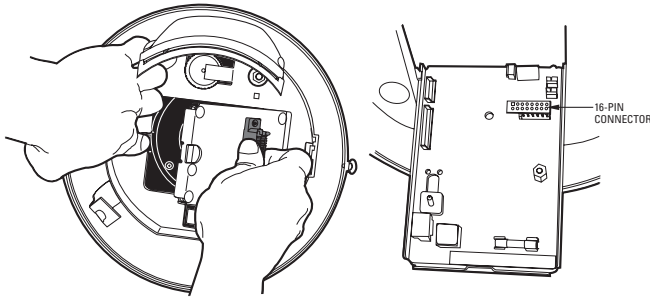
# Welcome

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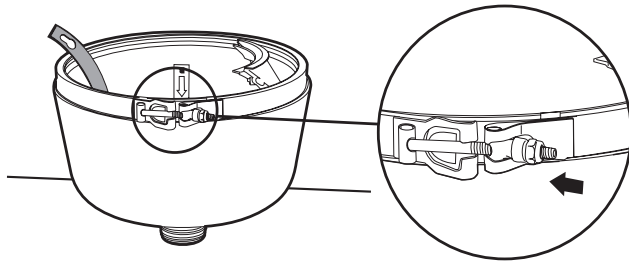
Thank you for purchasing Pelco's Pressurized Spectra III™ Series dome system with feedthrough for fiber optic modules with an ST-type connector. Your new system provides ultimate protection of the camera optics and electronics from moisture, corrosive gases, and airborne contaminants.

This manual is designed to be a reference tool for the installation of your system. For best results and ease of installation, the dome system should be assembled, pressurized, and tested before installation. A Pressurized Spectra III cable harness (supplied with the back box) is required to test and monitor the pressurized dome.

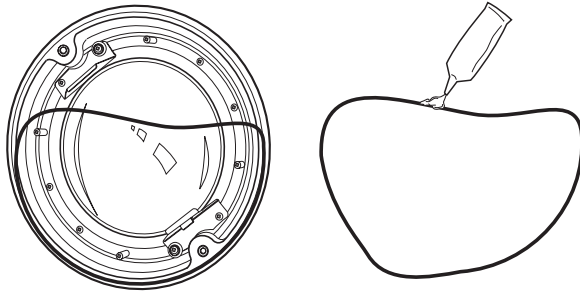
# Preinstallation



- 1** Install the fiber optic module: Open the hinged door to the back box by pushing the tab lock towards the wall of the unit and lifting the door open. Remove the plug from the 16-pin connector. Install the module in the 16-pin connector. Secure the module to the circuit board standoff using the screw and lock washer provided. Connect the back box fiber optic connector to the mating connector on the module. Follow all applicable instructions provided by the manufacturer of the fiber optic module.

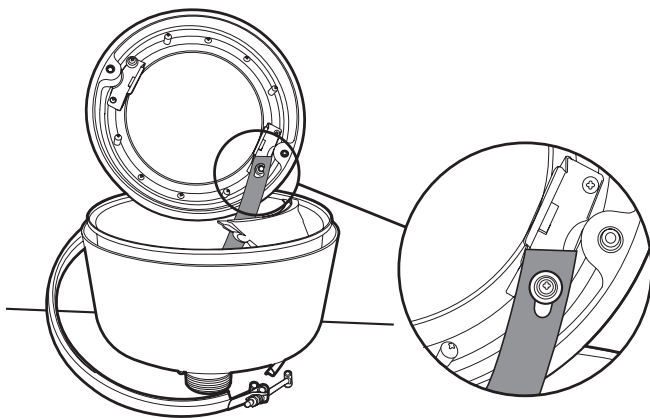


- 2** Loosen the V-band attached to the back box and let it hang to the side.



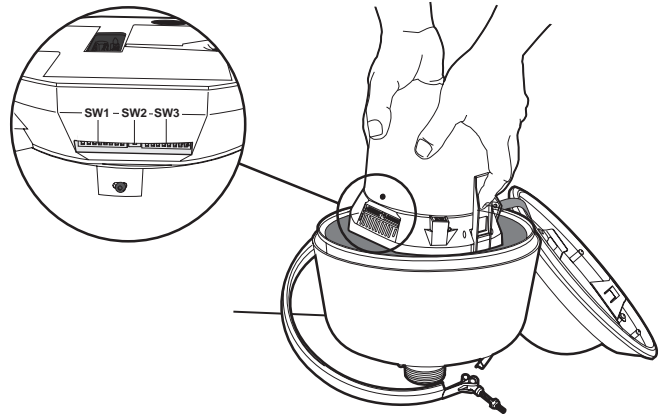
- 3** Prepare the lower dome for installation:
  - a. Remove the O-ring from the lower dome.
  - b. Lightly apply O-ring lubricant (supplied) to the O-ring.
  - c. Reinstall the O-ring in the groove on the trim ring.

**IMPORTANT:** Use the supplied O-ring lubricant to ensure an air-tight seal when installing the lower dome.

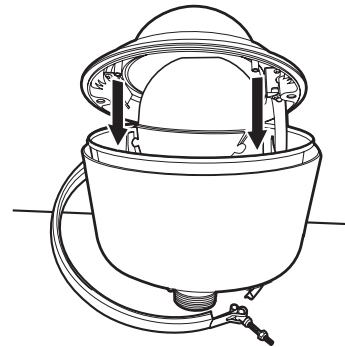


- 4** Attach the back box leash to the lower dome, and let the lower dome hang to the other side of the back box.

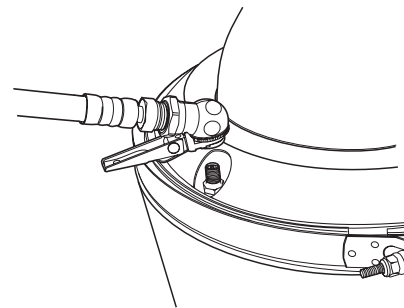
- 5** Install the dome drive:
- Set the DIP switches located on the side of the dome drive. Refer to the labels located on the top of the dome drive or to the Quick Start Guide shipped with the dome drive.
  - Line up the blue (A) and red (B) tabs with the blue (A) and red (B) labels.
  - Push in on the tabs. Insert one side and then the other side. Continue pushing until both sides of the dome drive click into place.



- 6** Install the lower dome:
- Position the lower dome so that the blower duct inside the back box is between the studs attached to the inside of the lower dome.
  - Install the V-band around the lower dome and then tighten the fastener of the V-band.
  - Test and check the operation of the unit before pressurizing the dome.



- 7** Pressurize the inside of the dome with nitrogen:
- Remove the cap from the Schrader valve of the dome. Place the air chuck from the charging kit over the Schrader valve of the dome system.
- NOTE:** You may use your own charging equipment or Pelco's EH8000RKIT recharge kit. If you are using your own equipment, adjust the regulator for an output pressure of 12psi (83 kPa).
- Open the tank valve of the charging kit. Fill the dome with nitrogen for a **minimum of five minutes** to replace the oxygen inside the dome with nitrogen.
  - Remove the air chuck and then replace the Schrader valve cap.
  - Refer to the *Operation/Programming* manual for instructions on how to view the current readings for temperature and pressure. Record the initial temperature and pressure readings of the dome in the space provided below:



Initial Temperature \_\_\_\_\_

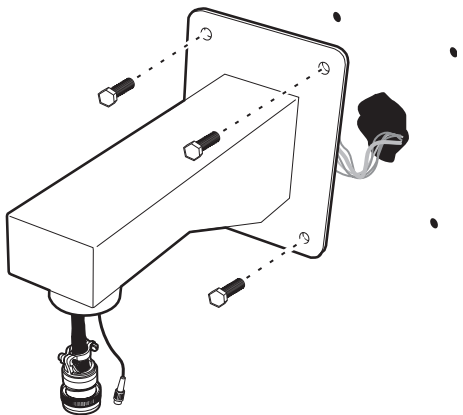
Initial Pressure \_\_\_\_\_

**IMPORTANT:** Record the initial temperature and pressure readings for future reference.

**NOTE:** It is normal for changes in temperature to cause dome pressure to rise and fall.

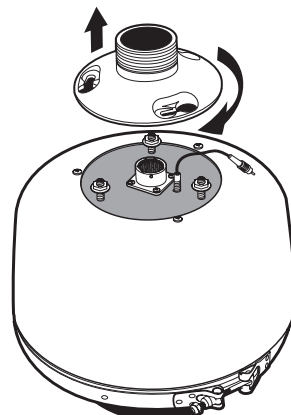
# Site Installation

1



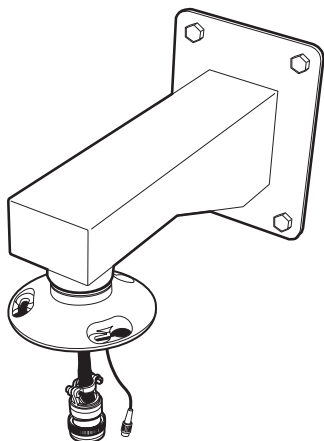
Feed a fiber optic cable (not supplied) and the supplied wiring harness into the front of the mount and out the back of the mount. Connect the wires as required. Refer to Tables A, B, and C for cable and wiring information. Fasten the mount to the mounting surface. Refer to the instructions supplied with the mount.

2



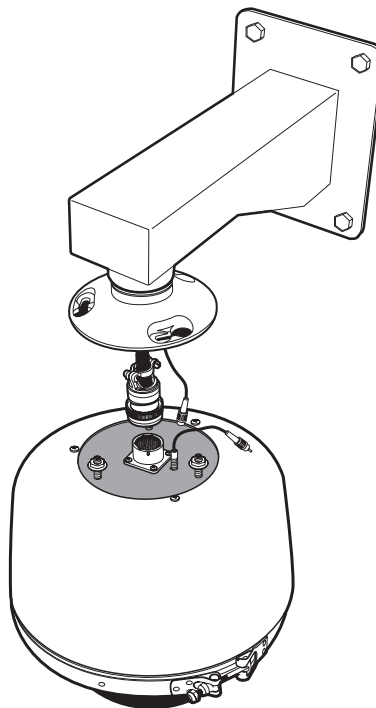
Remove the back box mounting plate: Loosen the nuts on top of the back box until they reach the locking material at the end of the studs, and then turn the mounting plate clockwise and lift.

3



Thread the wiring from the mount through the mounting plate, and then attach the mounting plate to the mount. If outdoors, apply thread compound (provided) to the threads on the mounting plate.

4



Attach the connector of the wire harness to the mating connector located on the top of the back box. Connect the fiber optic cable. Insert the studs and nuts on top of the back box into the mounting plate, turn the back box counterclockwise, and then tighten the three nuts.

**Table A.** Fiber Optic Cable Types

Spectra Model	Cable Type	Connector
Single mode (PRS models)	9/125 $\mu\text{m}$ cable	ST type
Multimode (PRM models)	62.5/125 $\mu\text{m}$ cable	ST type

**Table B.** 24 VAC Wiring Distances

Wire Gauge				
Total VA	20 (0.5 mm <sup>2</sup> )	18 (1.0 mm <sup>2</sup> )	16 (1.5 mm <sup>2</sup> )	16 (2.5 mm <sup>2</sup> )
75	37 ft (11 m)	60 ft (18 m)	95 ft (29 m)	153 ft (46m)

**NOTE:** These are the recommended maximum distances for 24 VAC applications and are calculated with a 10 percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.)

**NOTE:** Input power for the dome is 24 VAC only. Power consumption is 75 VA per dome.

Use a 24 VAC transformer with a minimum of 100 VA.

**Table C.** Configuration of Wire Harness

Pin	Wire Color	Function
<b>9-Conductor Cable</b>		
A	Black	Alarm 1
B	Red	Alarm 2
C	White	Alarm 3
D	Green	Alarm 4
E	Brown	Alarm5
F	orange	Alarm 6
G	Yellow	Alarm 7
H	Violet	Ground
–	Blue	Not Used
<b>5-Conductor Cable</b>		
J	Black	Relay N.O. (Aux. 1)
K	Red	Relay N.C. (Aux. 1)
L	Green	Relay Common (Aux. 1)
M	Brown	Ground
N	White	Auxiliary 2
<b>Power Wires</b>		
a	White	24 VAC (AC HI)
b	Black	24 VAC (AC LO)
c	Green/Yellow	Earth Ground



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